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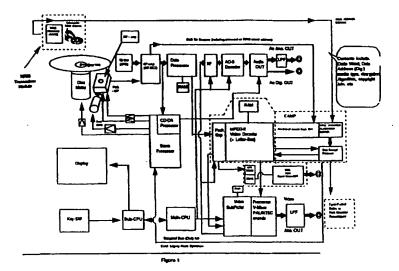
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(54) Improvements in or relating to security systems

The invention consists of attaching or embed-(57)ding a "TIRIS" transponder (or other RF or IR or barcode or other identifying device) physically into the center of the proposed DVD disk. Once a disk is input to a media player, the interrogation portion of the media player transmits an interrogation signal to the transponder located on the disk. Once empowered with the interrogation signal, the transponder accesses the predetermined address, code word, encryption algorithms, media type information, and copyright information from it's memory. Then the transponder transmits the address, the code word, encryption algorithms, media type information and copyright information to the interrogator, located within the media player, and the interrogator sends the transponder data stream to a conditional access management processor(CAMP).. Simultaneously with the processing action of the CAMP, the interrogator instructs the player to access the data_word at the predetermined address on the disk and the player accesses the data_word on the disk. The media player only plays if there is a match between the read data_word and received code word and the received algorithm correctly decrypts the content of the media prior to decoding.

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Block Diagram of DVD Player (ROM Type for Published Media) + TIRIS cypher





EUROPEAN SEARCH REPORT

Application Number EP 97 12 2526

Category	Citation of document with income of relevant passa		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.6)	
A	US 5 461 386 A (KNEE 24 October 1995 * abstract * * column 1 * * column 2 * * column 3, line 1 * * column 4, line 37 * column 5, line 1 * figures 1A,1B,1C	ELKAMP MICHAEL) - line 49 * - line 67 * - line 8 *	1,5	G11B20/00 G11B23/28	
A	"TIRIS ZET AUTODIE' POLYTECHNISCH TIJDSG ELEKTROTECHNIEK, ELG vol. 49, no. 5, May XP000454909 * the whole documen	CHRIFT, EKTRONICA, 1994, page 7	1,5		
A	US 5 287 112 A (SCH 15 February 1994 * abstract * * column 1, line 1		1,5	TECHNICAL FIELDS	
A	US 4 827 395 A (AND 2 May 1989 * abstract * * column 1, line 50 * column 3 * * column 4, line 1 * column 6, line 25 * column 7 * * column 8, line 1 * column 11, line 6 * column 12, line 1 * column 12, line 1 * column 19, line 1		1,5	G11B G01S G06K G07C H04L	
	The present search report has	been drawn up for all claims Date of completion of the see.	ach	Examiner	
	THE HAGUE	1 February 19	1	rel-Faucheux, C	
X:pa Y:pa do A:te	CATEGORY OF CITED DOCUMENTS irticularly relevant if taken alone irticularly relevant if combined with ano current of the same category chnological background on-written disclosure termediate document	T: theory or p E: earlier pat after the fil ther D: document L: document	orinciple underlying the ent document, but put ling date cited in the application date for other reason of the same patent fam.	e invention blished on, or on s	



EUROPEAN SEARCH REPORT

Application Number EP 97 12 2526

	DOCUMENTS CONSIDE	RED TO BE RELEVAN		
ategory	Citation of document with inc of relevant passa		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
	US 5 499 017 A (BEIG 12 March 1996 * abstract * * column 1 * * column 2, line 1 - * column 3, line 65 * column 4, line 1 -	- line 26 * - line 67 *	1,5	
\	US 5 430 441 A (BICK 4 July 1995 * abstract * * column 1, line 13	- line 45 *	1,5	
A	US 4 918 955 A (KIMU 24 April 1990 * abstract * * column 3, line 10 * figure 3 *		1,5	
A	US 5 245 332 A (KATZENSTEIN HENRY S) 14 September 1993 * abstract *			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
P,A	EP 0 805 575 A (TEX. 5 November 1997 * abstract * * page 2 * * page 3, line 1 - * page 4, line 20 - * page 5 * * page 6 * * figure 4 *	line 52 *		
		-/ 		
	The present search report has	been drawn up for all claims		
	Place of search	Date of completion of the sea	1	Examiner C
	THE HAGUE	1 February 19		arel-Faucheux, C
X:pa Y:pa do A:te O:na	CATEGORY OF CITED DOCUMENTS articularly relevant if taken alone articularly relevant if combined with ano ocument of the same category chnological background on artificial background on the mediate document	E : earlier pa after the fi ther D : document L : document	t cited in the applicat cited for other reason of the same patent fa	ublished on, or Ian Ins



EUROPEAN SEARCH REPORT

Application Number EP 97 12 2526

	DOCUMENTS CONSIDER	ED TO BE RELEVAN	<u> </u>		
ategory	Citation of document with indici	ation, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)	
4	US 5 450 087 A (HURTA 12 September 1995 * abstract * * column 2, line 21 - * column 3, line 1 - * column 3, line 65 - * column 4, line 1 - * column 7, line 44 - * column 18, line 51 * column 19, line 1 -	line 68 * line 3 * line 68 * line 9 * line 47 * - line 68 *	1,5		
	,			TECHNICAL FIELDS SEARCHED (Int.Cl.6)	
	The present search report has b	veen drawn up for all claims			
		Date of completion of the s	earch	Examiner	
Place of search				Barel-Faucheux, C	
Y:	THE HAGUE CATEGORY OF CITED DOCUMENTS particularly relevant if taken alone particularly relevant if combined with anot document of the same category technological background non-written disclosure intermediate document	T : theory E : earlier pater the D : docume L : docume & : membe	T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filling date D: document cited in the application L: document cited for other reasons 4: member of the same patent family, corresponding document		

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 97 12 2526

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

01-02-1999

Patent document cited in search repor	t	Publication date		Patent family member(s)	· Publication date
US 5461386	A	24-10-1995	JP US	8296354 A 5561430 A	12-11-1996 01-10-1996
us 5287112	A	 15-02-1994	EP	0674298 A	27-09-199
02 250/115	^	15 02 155 1	JP	7131376 A	19-05-199! 20-12-199
			US	5374930 A	
UC 400720E	 A	02-05-1989	US	4656463 A	07-04-198
US 4827395	A	02 03 1303	CA	1249359 A	24-01-198
			FR	2544867 A	26-10-198
			GB	2141006 A,B	05-12-198
			JP	60100294 A	04-06-198
		10.00.1006	AU	665797 B	18-01-199
US 5499017	Α	12-03-1996	EP	0615645 A	21-09-199
			JР	7504771 T	25-05-199
US 5430441		04-07-1995	NONE		
	 A	24-04-1990	JP	1737326 C	26-02-199
US 4918955	A	24-04 1330	JΡ	4015141 B	17-03-199
			JР	63093649 A	23-04-19
		14-09-1993	C A	1316268 A	13-04-19
US 5245332	Α	14-09-1993	DE	68928801 D	08-10-19
			DE	68928801 T	14-01-19
			EP	0347893 A	27-12-19
			ĴР	2051931 A	21-02-19
EP 0805575		05-11-1997	JP	10075241 A	17-03-19
	A	12-09-1995	 JP	8084095 A	26-03-19
US 5450087	А	16 03 1333	Ü\$	5686920 A	11-11-19

Por more details about this annex : see Official Journal of the European Patent Office, No. 12/82